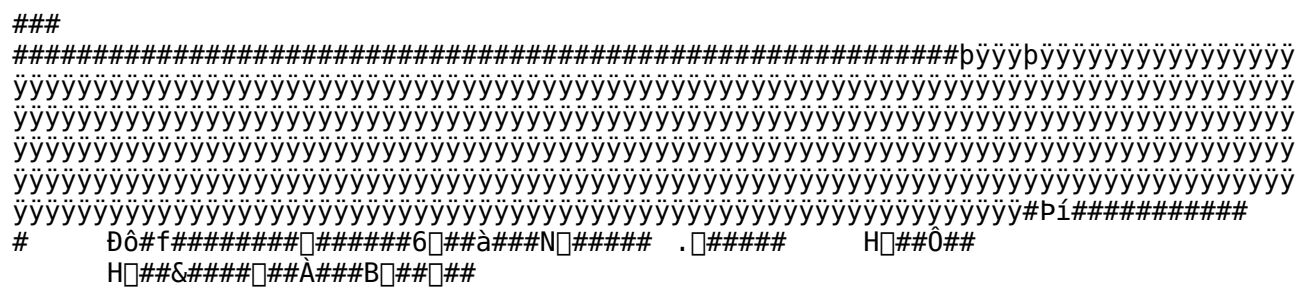

##ÿÿ#####ÿ¥#ÿÿ#d#########d###########«The Integrated Maintenance Data System is unlike any other maintenance data collection system the Air Force has used over its history. As we go through this briefing, weÕll attempt to point out some of the advances the Air Force has and can realize through application of IMDS.WeÕve selected a limited number of functional domains within base level maintenance to highlight some of the improvements IMDS brings to the table.d#

################# ########################ÿ¥#ÿÿ#d#########d########L#□###üj÷##Ý Çÿÿ####ÿÿ####UÿJ#ÿÿ#K#########d###########§Facilitate maintenance process improvementsSupport Agile LogisticsReduce time of parts in the pipelineImprove weapon system managementStreamline maintenance documentation Facilitate logistics process integration (maintenance, supply, transportation, et al.)Focus must be on functional integrationNot necessarily system or technical integration Eliminate reliance on paper documentationNOT JUST TO REPLACE CAMS !!!!!□#

################# ########################ÿ¥#ÿÿ#d#########d########L#□###ûê÷##]
¾ÿÿ####ÿÿ####Uÿ(#ÿÿ#Y#########d###########ßAbility to achieve worldwide asset visibilitySingle point of input for dataAvailable to all users with need to know regardless of level - The same dataAllows depot maintenance activities access to actions taken at base level and vice versaFacilitates complete life cycle asset managementFunctional integration with other logistic disciplines to provide full supply chain management capabilityModernized supplyNeed to interface with Air Force financial systemsDistributionÇ#

##ÿÿ#####ÿ¥#ÿÿ#d#########d###########@Many people have asked why we need IMDS. The simple answer is that we need to do our business smarter because we simply do not have the resources we need to continue to operate in the old fashioned manual paper-based environment weÕve used for the life of the United States Air Force. IMDS provides a single source of maintenance management data that allows managers regardless of where they are to have access to any information they require to support operational or logistics support decisions. These capabilities are briefly described on this chart and probably explain themselves.Although IMDS provides a worldwide view of maintenance it is not the complete logistics solution. By integrating with other functional disciplines and their support systems IMDS contributes to an improved supply chain management capability.#

##ÿ¥#ÿÿ#d#########d########L#□###û|öÏ#²
{############U#J####K#########d###########ÉTotally new maintenance concept based on Integrated Maintenance Information System (IMIS) prototype and Portable Maintenance Aid (PMA)Automated debriefing using Fault Reporting/Fault Isolation ManualsDiagnostic tool (Not in IMDS today)Interactive Electronic Technical Manual (IETM) (Not in IMDS today)Improve process through commercial best practices and commercial off-the-shelf-softwareUse point of maintenance documentation to eliminate paper forms##

##ÿÿ#####ÿ¥#ÿÿ#d#########d###########□IMDS was originally intended to be based on the Integrated Maintenance Information System (IMIS) that was developed and prototyped by the Air Force Human Resources Lab (Armstrong Lab) in 1994. The concept was for the system to absorb much of the troubleshooting and documentation workload now done by maintenance personnel. It had an automated debriefing system that took advantage of automated fault reporting and fault isolation manuals to create a fault code for each reported discrepancy. Then the maintenance technician used a portable maintenance aid that contained an interactive electronic technical manual to aid in the troubleshooting process. Results from this prototype proved that such a system could provide measurable improvements in troubleshooting, aircraft repair, and data collection. This was the technical basis for IMDS, although we have not followed that model exactly.
##

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      ®ÿÿ####ÿÿ#####ÿ¥#ÿÿ#d#########d###########□Graphical User Interface (GUI)
Single data entryOn-line notificationOperate on-line at point of maintenance
Automated Equipment Forms##
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ÿ□#/  ®ÿÿ####ÿÿ#####ÿ¥#ÿÿ#d#########d###########□Fleet Status Reporting and
ConfigurationTotal Asset VisibilityClosed Loop MaintenanceSupport for Agile
LogisticsProactive Logistics Support Monitoring#
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#fÿÿ####ÿÿ#####ÿ¥#ÿÿ#d#########d###########<Start at the Point of Maintenance
and Work Up the Data Chain#
```

#########ÿ¥#ÿÿ#d#########d###########5Inc 1 - 3 are Base Level Core requirements development.Increment 1 (BETA) = basic MDD, job notification, point of maintenance documentation, debriefing, simple configuration management and manual status reporting provided.Increment 2 = Training, mission scheduling, Unit Mission status recording, LCN level configuration management, work allocation, simple analysis functions, basic deployment capability, and automated equipment tags, 781A & K, and C-E trouble log forms.Increment 3 = ATE management, Ad Hoc reporting tool, multiple type utilization missions, automatic status reporting, deficiency reporting, 2 way CFRS interface, UTE allocation/schedule, automated history forms, Global Logical Data Repository (data warehouse), define/establish depot BETA, and C2 security, COE level 5, Y2K certifications.##

##ÿÿ#####ÿ¥#ÿÿ#d#########d###########ûAt Beta and currently in use during development and testing:Thick Client/Portable Server: Pentium 266 mhz, 192 mb RAM, 8 gb h/dThin Client: Pentium 133 mhz, 32 mb RAM, 60 mb H/DBrands tested: Husky, Badger, Fujitsu, Panasonic, CruisepadRF: Access point (radio) 500 mw antenna (Proxim omni, patch, or yagi) wireless PC card NIC (Proxim) with corresponding antennaApplication servers: Compaq Proliant, 1GB RAM, 6 GB disk, quad 166 processors--estimate each application server support 20-30 users Database, Data Warehouse, and IMDS Central Servers: HP UNIX 9000 K420 server, 1 gb RAM, 133 gb disk, dual processor 18 COTS Software packages for production/development: PowerChute+ (NT), Optivity, Firewall-1, Oracle Server, Oracle Client, TME 10 Enterprise Console (Tivoli), Uniface 6.1DT, GOLD w/ Polyserver and Uniface, WinFrame, MultiCruise, Formflow, Networker, Transaccess, HP-UX 10.2, NT Server 4.0, NT Workstation 4.0, MS Access15 more COTS software packages used in addition to the above for IMDS development##

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################# #########################ÿ¥#ÿÿ#d#########d########L#□###û=öª##
      V############U#(####Y#########d###########áCommandersA functionally
integrated maintenance and logistics support system improves visibility over
assets for improved command and controlImmediate access to up to the minute
fleet statusImproved analysis tools enable more rapid, better informed decisions
Maintenance Managers At All LevelsAccurate, more timely information available
Promotes operational efficienciesPotential to move valuable technicians back to
direct productionImmediate access to current fleet statusÝ#
```

##ÿÿ#####ÿ¥#ÿÿ#d#########d############When we talk about operational efficiencies, weÕre talking aobut the streamlining that IMDS enables; real-time data production, access, reallocation of manpower from non-value added tasks to direct production, quicker access to debriefing, and work orders. Other efficiencies include the crew chiefÕs ability to generate work orders directly rather than going through a middle man like expediter/Maintenance Operations Center. For the operations guy, it provides direct access to maintenance information such as aircraft status, etc. #

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Ç############U#(####Y#########d###########□Status Boards -- One stop shopping for equipment status with numerous displays available, Can be tailored, similar to MOC status boards but with more informationStarting point for most actions in IMDSMaintenance Log -- Single view of any piece of equipment and actions associated with that itemPrimary management tool for Crew Chiefs, other equipment managersCan be tailored to meet needs of individual usersÒ#

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      Çÿÿ####ÿÿ####UÿJ#ÿÿ#K#########x###########ÿSummary WindowSummarizes
current status for new, unopened, opened work ordersEnables Exceptional Release
Pilot Acceptance accomplished from summaryDrivers-- Allow users to customize key
aspects of IMDS to fit each userÕs particular need for information##
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      Vÿÿ####ÿÿ####Uÿ(#ÿÿ#Y#########d###########cSupports multiple configuration definitions:Physical, Logical, and Mission Possible to link different types in the same structureID on ID/System on System/SRD on SRD Flexible position reference managementLCNs long, difficult to rememberIMDS allows use of various position definitions, such as Work Unit Code (WUC) and Reference Designator (REF-DES) ##

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      Vÿÿ####ÿÿ####Uÿ(#ÿÿ#Y#########Z###########eSeparate ad-hoc reporting tool
based on MS-AccessVery flexibleMany Air Force analysts have MS-Access experience
Over 100 standard algorithmsSupports simple logistic support analysis:ÔFlyableÕ
ratesMean Time between Failure and Repair etc.Cannot Duplicate / Re-Test OK
ratesApproximately 50 standard reportsLRU backlog historyCannibalization
history##
```

#################(##ÿ¥#ÿÿ#d#########d########L#□###ûmöª#S Vÿÿ####ÿÿ####UÿJ#ÿÿ#K#########d############Base level inputs automatically and immediately visible at SPM, depot, MAJCOM, NAFDepot user will have accurate, up-to-date history and usage information on incoming reparable assetsItem managers will have accurate consumption information to enable improved spares provisioning, both reparables and consumablesEngineers will be able to distribute TCTOs electronically and WSMs will receive compliance actions as they are documentedProduct improvement analysis can be facilitated through rapid access to accurate maintenance information³#

###ÿ¥#ÿÿ#d#########d#########L#□###ûÀö~#□ □############U#(####Y#########d###########ÒReplacesCore Automated Maintenance System (CAMS)Two Way InterfacesStandard Base Supply System (SBSS) Comprehensive Engine Maintenance System (CEMS)Reliability and Maintainability Information System (REMIS)F-15 Computerized Fault Reporting System (CFRS)One Way InterfacesApplication Support Environment (ASE) G021Logistics Composite Model (LCOM)Reliability, Availability, and Maintainability for PODS (RAMPOD)Theater Battle Management Core Systems (TBMCS) #

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V############U#(####Y#########Z########### Schedule not set beyond OT&EF-15, then F-16 Third weapon system not determinedCommunications-Electronics not determinedRequirements to field Increment 3 to an MDSLogical configuration built and validatedCAMS data conversion programs in placeUnique data requirements in placeUnique interfaces in placeManpower available to convert/validate physical configuration dataBase infrastructure sized and in place#

##ÿÿ####@ÿ¥#ÿÿ#d#########d###########3Jul 96 Contract awarded to Andersen ConsultingJul 97 Increment 1 released to 96th Communications Squadron MetNav Shop, Eglin AFB, FL for Beta evaluationSep 98 Beta evaluation began at 60th Fighter Squadron, Eglin AFB, FL; started with two aircraft, grew to 4 aircraft Jul 98 Increment 2 released at Beta site, major improvements to all Increment 1 functionality, ad-hoc query capability for user-defined inquiries and analysis, standalone deployment capability, some automated formsSep 98 another significant release; IMDS portion of interface (9 engine maintenance transactions) with Comprehensive Engine Management System (CEMS portion of interface with IMDS must still be built); production management for personnel and training delivered (some training management capability still necessary according to Training IPT--waiting additional training requirements to be added to ORD)Mar 00 Increment 3 will be released for OFT; Operational Test and Evaluation is now planned to take place at the 33rd Fighter Wing and 728th ACS at Eglin AFB, FL. Based on the results of the evaluation, OSD will make a decision as to whether IMDS is ready to field. Initial fielding will be to F-15 and communications units. Fielding will be incrementally expanded to other weapon systems as other equipment configurations are loaded into IMDS"#

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